WHAT IS CLAIMED IS:

1. A process for converting a hydrocarbon feed stream comprising:

passing a reformulation feed stream including saturated and olefinic hydrocarbons with carbon numbers of 5-8 to a reformulating reactor containing catalyst particles having a composition;

reformulating said reformulation feed stream in said reformulating reactor to produce a reformulated product stream, said reformulating proceeding at conditions that promote at least a 5% net yield increase in aromatics on a fresh reformulation feed basis indicating the occurrence of hydrogen transfer reactions; and

recovering said reformulated product stream.

2. The process of claim 1 wherein said reformulation feed stream is prepared by:

cracking a preliminary cracking feed stream with catalyst particles in a cracking reactor to produce a cracked product, said catalyst particles in said cracking reactor having a same composition as the catalyst particles in said reformulating reactor;

separating said cracked product from said catalyst particles in a separator vessel to obtain a cracked product stream; and

recovering at least a portion of said cracked product stream to be said reformulation feed stream.

3. The process of claim 2 further including isolating said reformulated product stream from said cracked product stream.

4. The process of claim 2 further comprising the step of cycling catalyst particles that had previously resided in said cracking reactor to said reformulating reactor.

5. The process of claim 1 wherein a greater proportion of hydrocarbons with carbon numbers of 5-8 undergo hydrogen transfer reaction than cracking reaction.

6. The process of claim 1 wherein olefins in said reformulation feed stream convert to isoparaffins in the reformulating reactor.

7. The process of claim 1 wherein the concentration of sulfur compounds in the reformulated product stream is less than its concentration in the reformulation feed stream.

8. The process of claim 1 wherein the concentration of nitrogen compounds in the reformulated product stream is less than its concentration in the reformulation feed stream.

9. The process of claim 1 wherein the reformulation feed stream has an initial boiling point below about 200°C (392°F).

10. A process for converting a hydrocarbon feed stream comprising:

contacting said hydrocarbon feed stream with catalyst particles having a composition in a first reactor to produce a cracked product;

separating said cracked product from said catalyst particles in a vessel to obtain a cracked product stream;

recovering a naphtha stream from said cracked product stream, said naphtha stream having an initial boiling point below 127°C (260°F);

contacting said naphtha stream with catalyst particles having said composition in a second reactor to produce an upgraded product stream; and

recovering said upgraded product stream and isolating said upgraded product stream from said cracked product stream.

11. The process of claim 10 wherein hydrogen transfer reactions predominate over cracking reactions in the second reactor

12. The process of claim 10 wherein olefins convert to aromatics in the second reactor.

13. The process of claim 10 wherein olefins convert to isoparaffins in the secondary reactor.

14. The process of claim 10 wherein the concentration of sulfur compounds in the upgraded product stream is 50% less than its concentration in the naphtha stream.

15. The process of claim 10 wherein said naphtha stream has an end point below 230°C (446°F).

16. The process of claim 10 wherein said catalyst particles in said second reactor previously resided in the first reactor.

17. A process for converting a hydrocarbon feed stream comprising:

contacting said hydrocarbon feed stream with catalyst particles having a composition in a first reactor to produce a cracked product;

separating said cracked product from said catalyst particles in a vessel to obtain a cracked product stream;

recovering an oil stream from said cracked product stream having an initial boiling point above about 200°C (392°F);

cycling catalyst particles that had resided in said first reactor to a second reactor, said second reactor being discrete from said vessel;

contacting said oil stream with catalyst particles in a second reactor to produce an upgraded product stream; and

recovering said upgraded product stream and isolating said upgraded product stream from said cracked product stream.

18. The process of claim 17 further comprising the step of hydrotreating said oil stream.

19. The process of claim 17 wherein no hydrogen is added to the second reactor.

20. The process of claim 17 wherein the end point of said oil stream is below about 288°C (550°F).